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Knowledge and Attitudes of Students in a Caribbean Medical School towards HIV/AIDS

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ABSTRACT

Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome (HIV/AIDS) is seen as one of the most devastating infection/disease known to have attacked the human population. This study is aimed at assessing the level of knowledge, attitudes and misconceptions of the medical students in a Caribbean Medical School towards HIV/AIDS. Semi-structured questionnaires were used to collate information. Out of 150 questionnaires distributed, 130 were filled, showing a response rate of 87%. The ages of the respondents ranged from 19-45 years with mean age of 26. Our finding shows that the knowledge of HIV/AIDS is high: 97.7%. HIV/AIDS associated beliefs: 22.3% sees the disease as a punishment for unfaithfulness or immorality. A negative attitude towards condom use was seen in 3.8% of the respondents. Risky behaviours were identified but the prevalence of such behaviours is low. Religion was identified to play an important role in the conception and misconception about condom usage and possibly transmission of the virus. Behaviour modification programmes is recommended to correct misconceptions among medical students.

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Key Words; HIV/AIDS, Knowledge, Attitudes, Students, Caribbean, Medical School, Saint Lucia.

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INTRODUCTION

Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome (HIV/AIDS) is seen as one of the most devastating infection/disease known to have attacked the human population; reported to often affects the economically productive young adults (Oguntibeju *et al.*, 2003). The same authors also noted that within 20 years since its first identification, HIV/AIDS has become a pandemic and posed a serious challenge to mankind in different aspects of life.

Ignorance about the infection and how the virus is transmitted can generate fear and prejudice towards those who are infected, so the important role of adequate information dissemination, education and communication can not be ignored. Available evidence documented that HIV is transmitted through unprotected heterosexual and homosexual relationship, infected blood during transfusion, injections with unsterile needles (intravenous drug abuse) and accidental needle stick injuries, mother to child transmission (Smith *et al.*, 1995; Munoz *et al.*, 1989). Research findings have shown that persons living with STD have three to five fold increase in risk of being infected with HIV than those who are not having sexually transmitted diseases (Oguntibeju & Fabode, 2002; Royce *et al.*, 1997).

With many studies already carried out on the pathogenesis of this virus and the various modes of transmission been established, it has been observed that increase in the awareness of the infection is not commensurate with the rate of spread of the infection (Kalasagar *et al.*, 2006).

Knowledge and attitudes studies are generally used worldwide in designing health promotion and health education programme intervention that would be used to impact knowledge, alter attitudes and behaviour that are risky to health (UNAIDS, 2002). In addition, since AIDS prevention largely depends on health education and behavioural changes based on AIDS awareness, particularly among young adults who are prone to risky behaviour hence the need for the study among students in a medical school in St Lucia. This study is aimed at assessing the level of knowledge, attitudes and misconceptions of the students

towards HIV/AIDS. The study was deemed important and relevant due to the increasing spread of HIV in the Caribbean and other parts of the world.

To our knowledge, no such study has been carried out in Saint Lucia.

MATERIALS AND METHODS

This is a descriptive study where qualitative data were gathered via semi-structured questionnaire. The study was done among the preclinical students at the Spartan Medical School. Spartan Health Sciences University is a private medical school located in the rural southern St Lucia, with 90% of the students from United States of America and Canada.

Questionnaires were distributed to the students in their various trimester classes as a group after explaining the aims of the study to them and obtaining verbal consents from them. The questionnaires consisted of personal data (excluding names), demographic characteristics, knowledge about HIV/AIDS, its causes, modes of transmission, signs and symptoms as well as their attitudes regarding HIV/AIDS. Each questionnaire took 10 -15minutes to complete. The protocol and design of the study was approved by the Academic and Ethical committee of Spartan Health Sciences University.

The data were collated and analysed using the Statistical Package for Social Sciences 13.0 (SPSS 13.0) data base. Statistical significance was set at $p < 0.01$. Pearson's Chi-Square was used to determine the correlation.

RESULTS

Out of 150 questionnaires, 130 were filled, showing a response rate of 87%. The ages of the respondents ranged from 19-45 years with mean age of 26 (SD 5.2) with 64% males and 36% females. Table 1 shows the assessment of knowledge of HIV/AIDS: 97.7% and 98.5% know the definition of HIV and AIDS respectively, with 96.2% aware of the various modes of transmission and 92.3% are knowledgeable about risks of contracting the disease.

Table 1:
Knowledge of HIV/AIDS

Knowledge	Yes	No	Invalid Response
Do you know what HIV means?	97.70% (127/130)	1.50% (2/130)	0.80% (1/130)
Do you know what AIDS means?	98.50% (128/130)	0.80% (1/130)	0.80% (1/130)
Do you know how HIV/AIDS is transmitted?	96.20% (125/130)	2.30% (3/130)	1.50% (2/130)
Do you know who are at risk of contracting HIV/AIDS?	92.30% (120/130)	4.60% (6/130)	3.10% (4/130)

Table 2 illustrates HIV/AIDS associated beliefs: 96.9% believe that HIV/AIDS exists, 22.3% sees the disease as a punishment for unfaithfulness or immorality, while the percentage of people who believe that the virus can be contracted through other means are: kissing (25.4%), sharing toilet facilities (16.2%), shaking hands with HIV-positive/AIDS patients (3.8%), sharing cutleries (17.7%), through mosquito bites (17.7%), not holding a strong religious belief in the absence of condom use (12.3%), through condom use (36.9%), in the absence of the A,B,C principle of prevention of HIV/AIDS (64.6%). There is an exact 50% split (43.1%:43.1%) between those who believe HIV/AIDS can be contracted/transmitted via barbing activities and those who do not believe.

Table 2:
HIV/AIDS Associated Beliefs

Belief	Yes	No	Invalid Response
Do you believe that HIV/AIDS exists?	96.90% (126/130)	1.50% (2/130)	1.50% (2/130)
Do you see HIV/AIDS as a punishment for unfaithfulness or immorality?	22.30% (29/130)	73.80% (96/130)	3.80% (5/130)
Can you contract HIV/AIDS by kissing?	25.40% (33/130)	72.30% (94/130)	2.30% (3/130)
Can you contract HIV/AIDS by touching/shaking hands with HIV-Positive/AIDS patients?	3.80% (5/130)	93.80% (122/130)	2.30% (3/130)
Can you contract HIV/AIDS through sharing of toilet facility?	16.20% (21/130)	79.20% (103/130)	4.60% (6/130)
Can you contract HIV/AIDS through sharing of cutlery?	17.70% (23/130)	76.20% (99/130)	6.20% (8/130)
Can you contract HIV/AIDS through mosquito bites?	17.70% (23/130)	76.20% (99/130)	6.20% (8/130)
Can you contract HIV/AIDS through barbing activities?	43.10% (56/130)	43.10% (56/130)	13.80% (18/130)
Do you believe that holding a strong religious belief can prevent you from contracting HIV (in the absence of condom use)?	12.30% (16/130)	83.10% (108/130)	4.60% (6/130)
Do you believe that using condoms is sufficient for protection against HIV/AIDS?	36.90% (48/130)	57.70% (75/130)	5.40% (7/130)
Do you believe in the A, B and C principle?	64.60% (84/130)	11.50% (15/130)	23.80% (31/130)

Table 3:
Risky Behaviour Associated with HIV/AIDS

Risky Behaviour	Yes	No	Invalid Response
Do you have tattoo marks?	9.20% (12/130)	89.20% (116/130)	1.50% (2/130)
Were the instruments used sterilized?	8.50% (11/130)	1.50% (2/130)	90.00% (117/130)
Were the same instruments used for other persons apart from you?	1.50% (2/130)	6.90% (9/130)	90.00% (117/130)
Do you share toothbrushes, shaving blades, hair clippers?	10.00% (13/130)	61.50% (80/130)	26.90% (35/130)
Do you have sex with prostitutes?	4.00% (4/130)	0.00% (0/130)	96.90% (126/130)
Do you have sex with casual partners?	21.50% (28/130)	0.00% (0/130)	78.50% (102/130)
Are you currently using any one or more parts of the A, B and C Principle? ¹	47.70% (62/130)	26.90% (35/130)	25.40% (33/130)

Table 3 shows behaviours associated with risk of contracting HIV/AIDS: 12 (9.2%) people have tattoo marks while 1.5% said the instruments were not sterilised and same instrument used for other persons. Thirteen persons share toothbrushes, shaving blades, hair clippers. Four percentage said they have had sex with prostitutes before, while 21.5% had sex with casual partners within the last 3 months, 62(47.7 %) are currently using the A,B,C principle of HIV/AIDS prevention.

Figure 1 shows the visual depiction of the relative correlations to condom use. All correlations have been adjusted relative to one individual using condom during sex.

Table 4 shows the beliefs associated with condom use: 97(74.6%) believe that it protects their life, 99(76.6%) said it should be used at all sexual intercourse, 109(83.8%) prevents the spread of HIV/AIDS, 38 (29.2%) reduces/eradicates sexual pleasures, 114(87.7%) prevents unwanted pregnancies, 107 (82.3%) prevents the

Table 4:
Beliefs Associated with condom use

Belief	Yes	No	Invalid Response
Condom usage protects my life	74.60% (97/130)	15.40% (20/130)	10.00% (13/130)
Condoms should be used at all times	76.20% (99/130)	16.90% (22/130)	6.90% (9/130)
Com usage prevents the spread of HIV/AIDS	83.80% (109/130)	9.20% (12/130)	6.90% (9/130)
Condom usage reduces/eradicates sexual pleasure	29.20% (38/130)	55.40% (72/130)	15.40% (20/130)
Condom usage prevents unwanted pregnancies	87.70% (114/130)	6.20% (8/130)	6.20% (8/130)
Condom usage prevents the spread of STD's/STI's	82.30% (107/130)	9.20% (12/130)	8.50% (11/130)
Condoms are too tight	19.20% (25/130)	56.90% (74/130)	23.80% (31/130)
Condom usage increases the spread of HIV/AIDS	7.70% (10/130)	83.80% (109/130)	8.50% (11/130)
Condoms have worms	2.30% (3/130)	86.90% (113/130)	10.80% (14/130)
There is no need to use condoms; I only have one partner	24.60% (32/130)	60.00% (78/130)	15.40% (20/130)
There is no need to use condoms; I will never be involved in sex	9.20% (12/130)	72.30% (94/130)	18.50% (24/130)
I do not use condoms at all	22.30% (29/130)	64.60% (84/130)	13.10% (17/130)
Condoms should be given to prisoners	66.20% (86/130)	23.10% (30/130)	10.80% (14/130)
Belief	Yes	No	Invalid Response
I do not use condoms because of religion	3.80% (5/130)	80.00% (104/130)	16.20% (21/130)
Condoms are not healthy	8.50% (11/130)	73.80% (96/130)	17.70% (23/130)

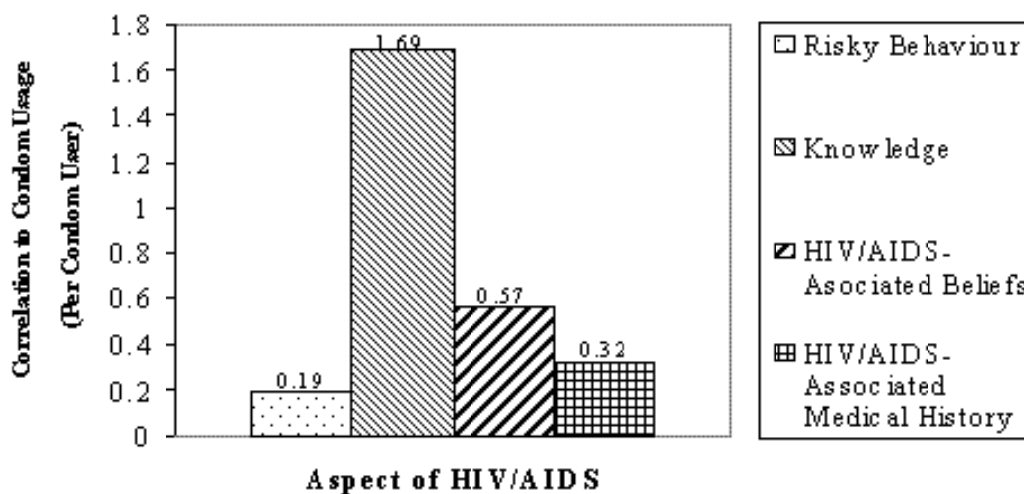


Fig. 1. Comparison of the Correlations of Different Aspects of HIV/AIDS to Condom Usage

spread of STDs/STIs, 25(19.2%) are too tight, 10 (7.7%) increases the spread of HIV/AIDS, 3 (2.3%) have worms, 32(24.6%) no need to use condoms, I have only one partner , 12 (9.2%) believe that there is no need to use condoms because I will never be involved in sex, 29(22.3%) do not use condoms at all, 86 (66.2%) should be given to prisoners, 5(3.8%) do not use condoms due to religious belief, 11(8.5%) condoms are not healthy.

DISCUSSION

As a group of medical students in the basic medical sciences with mean age of 26 years who are sexually active, they are vulnerable to the HIV, also considering the fact that majority of the students are foreigners, with 90% from United States and Canada, who are free from the strictures of their normal social environment of their countries, many engage in risky sexual behaviours as a means of relieving academic stresses and tensions. This makes this group an important target for primary prevention interventions.

In this study, the knowledge of HIV/AIDS is high among the students 128/130 (98.5%), though studies have shown that knowledge does not necessarily lead to behavioural changes (Rubin et

al., 1992). Our result showed that 96.2% knew the various routes of transmission of HIV/AIDS from one person to another which are unprotected sexual intercourse with an infected person, transfusion of infected blood and blood products, sharing/exchanging used needles with an infected person, transmission from an infected mother to an unborn baby during pregnancy. Also 92.3% knew that in certain people such as commercial sex workers, homosexuals and multiple heterosexual partners are at higher risk of contracting the virus. A study done by Schoenborn et al., 1994, in the United States of America among the general population indicated that responses to AIDS-related questions among less educated and older respondents is less likely to be correct than with well educated people, therefore we can deduce that the responses from our target group (the medical students) are more likely to be correct. The beliefs of the future doctors to HIV/AIDS as in case with our respondents revealed that about 97% believed that the virus is real, while slightly over 22% believe it is a punishment for unfaithfulness or immorality. This is a sign of negative attitude and quite worrisome especially seen in persons who are going to be health care providers. It is the authors believe that such attitude seen in this study is more related to

religious belief rather than cultural predisposition. Discriminatory or unethical behaviour by health care professionals against People Living with HIV/AIDS (PLWHA) has been documented in several countries (Adelekan et al., 1995; Danziger, 1994) and this attitude may create an atmosphere that interferes with effective prevention and treatment by discouraging individuals from being tested or seeking information on how to protect themselves and others from HIV/AIDS. Furthermore, such discriminatory practices and violations of international principles of medical ethics may serve to legitimize other forms of discrimination against people living with HIV/AIDS.

This study also demonstrated that some of the students beliefs about HIV/AIDS are erroneous such as transmission through kissing 33 (25.4%), touching or shaking hands with HIV-Positive/AIDS patients 5 (3.8%), sharing of cutlery 23 (17.7%), mosquitoes bites 23 (17.7%). Though the study was carried out among medical students of different levels of medical knowledge, we presumed that such beliefs are held by the freshmen or first trimester students. The attitudes of the students to the A, B, C principles of HIV/AIDS with 15 (11.5%) not believing in HIV is a real concern, which we (the authors) presumed will change before graduating from the basic medical sciences except they are dissidents.

The risky behaviours that the respondents were engaged in that could possibly increase the probability of them contracting HIV/AIDS were examined. Twelve persons had tattoo marks on their bodies and two persons said the instruments used were not sterilised, while thirteen respondents admitted to the fact that they share toothbrushes, shaving blades, hair clippers. This recognised practice of tattooing has been identified as a route of transmission of the virus (Cornea & Gisselquist, 2006). The risk of HIV transmission was seen to be higher when the tool used in tattooing is contaminated with HIV and it is immediately reused on another person according to a study done by Akeke et al., (2007) among prisoners in Lesotho, Southern Africa.

In this study, four of the respondents admitted to have had sex with prostitutes in the last 6 months

.Prostitution is believed to be one of the risky sexual practices in the spread of HIV both as a first line of infection from the commercial sex worker to a male customer and a second line of infection from husband to an innocent wife (Oguntibeju & Fabode, 2002)

Despite a relatively acceptable knowledge of modes of transmission and prevention methods, only a few of the participants declared using condoms, which is an indication that a relatively good knowledge about HIV/AIDS, even though necessary, may not be a key factor in behavioural change in fighting HIV epidemic in the study population. Condom usage was positively correlated in those who demonstrated a high level of knowledge of HIV/AIDS and lowest among those who are involved in risky behaviours such as tattooing and sexual activities, therefore we can deduce that such group has a low level of knowledge about HIV/AIDS, though this may not necessarily be so. A negative attitude towards condom use was seen in 3.8% of the respondents who said 'I don't use condom at all because of religion. This means that such misconceptions might encourage some individuals to take risks by creating false impression that they will be cured even if they become infected with AIDS or could lead to overconfidence and misconception that condom use is not necessary in the prevention of the spread of the virus.

CONCLUSION

This study is pertinent in this group of respondents, medical students in the basic medical sciences, who have little or no contact with patients yet, to view their perceptions towards the global fight against the spread of HIV. The Knowledge of HIV/AIDS is high among the students. Risky behaviours were identified but the prevalence of such behaviours is low. Religion was identified to play an important role in the conception and misconception about condom usage and possibly transmission of the virus.

RECOMMENDATION

Medical and Health Institutions should be encouraged to teach behaviour modification courses as part of the curriculum, in attempt to

minimise or eliminate biases in regard to the care of people living with HIV/AIDS .

Recreational activities should be promoted and encouraged in the universities as stress reduction programme and to prevent the students from receiving solace in risky behaviours such as unprotected sexual activities.

The role of religion plays in health education, promotion and delivery as it pertains to HIV/AIDS victims should be reviewed by various health policy makers

LIMITATION OF THE STUDY

The study was carried out in only one medical school due to problems of logistics and financial constraints, however the findings in this study was expected to give an insight into what prevails in other medical schools in the country.

The study was limited by paucity of literature regarding knowledge and attitudes on HIV/AIDS among medical students on the island since this is the first study done in St. Lucia.

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